

WHAT IS CLAIMED IS:

1. A fluid transmitting system with a lock-up clutch, comprising a pump impeller, a turbine runner which defines a circulation circuit between the turbine runner and the pump impeller, a side cover which is connected to the pump impeller and which defines a clutch chamber between the side cover and an outer side of the turbine runner to communicate with an outer peripheral portion of the circulation circuit, and a lock-up clutch disposed in the clutch chamber and capable of coupling the side cover and the turbine runner directly to each other,

the lock-up clutch being comprised of a clutch piston axially movably connected to the turbine runner to divide the clutch chamber into an inner oil chamber section on the side of the turbine runner and an outer oil chamber section on the side of the side cover, a lock-up control means adapted to generate a difference in pressure between the inner oil chamber section and the outer oil chamber section to advance and retract the clutch piston to and from an inner side of the side cover, a friction engaging means adapted to bring the clutch piston and the side cover into friction engagement with each other when the clutch piston is pushed against the inner side of the side cover, and a resilient member disposed between the clutch piston and the turbine runner to bias the clutch piston toward the inner side of the side cover,

wherein the resilient member is mounted to a piston hub of the clutch piston axially slidably carried on a turbine hub of the turbine runner so that the deformation attitude of the resilient member is changed freely, and a limiting means is provided between

the clutch piston and the turbine runner for limiting the amount of movement of the clutch piston toward the turbine runner to a constant value thereby preventing the excessive resilient deformation of the resilient member, when the clutch piston is urged toward the turbine runner while producing the deformation of the resilient member thereby bringing the friction engaging means into a non-operative state.

2. A fluid transmitting system with a lock-up clutch according to claim 1, wherein the piston hub is provided with an annular slip-off preventing portion which defines the mounting groove between the slip-off preventing portion and one side of the clutch piston.

3. A fluid transmitting system with a lock-up clutch according to claim 2, wherein the piston hub is provided in one side thereof with an annular recess whose bottom surface constitutes an inner wall of the mounting groove.

4. A fluid transmitting system with a lock-up clutch according to claim 2 or 3, wherein the clutch piston is comprised of a piston outer periphery-side member connected to the friction engaging means, and a piston inner periphery-side member which has been subjected to a surface hardening treatment and which has the piston hub and is coupled to the piston outer periphery-side member.